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FACTORS AFFECTING FIBER CONSUMPTION IN  
HOUSEHOLD TEXTILES

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FACTORS AFFECTING FIBER CONSUMPTION IN  
HOUSEHOLD TEXTILES

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### ABSTRACT

The consumption of household textiles and the fiber composition of household textiles consumed changed dramatically from 1955 to 1975. Changes in income, family composition, housing characteristics, preferences fashion, and lifestyle are related to changes in household textile consumption.

Keyword: Household textiles, fiber consumption, consumer, lifestyle.

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# FACTORS RELATING TO FIBER CONSUMPTION IN HOUSEHOLD TEXTILES

Christine J. Hager

## INTRODUCTION

Consumer use and acceptance of household textiles changed dramatically from 1955 to 1970. New fiber blends, finishes, textures, sizes, and colors increased the attractiveness of household textiles for decoration as well as utility and comfort. At the same time, increases in income, changes in family compositions, and increased housing construction created an expanded market for household furnishings. Although the expansion in carpets and rugs was linked strongly to these factors, the consumption of household textiles such as sheets, towels, blankets, and tablecloths also increased. Primarily because prices for manmade fibers were low relative to cotton, wool, and linen, manmade fibers and fiber blends penetrated the market. Easy care and durable press features were also important.

This paper examines trends in household textile consumption and in the use of fibers consumed in household textiles. Factors related to changes in consumption of household textiles are identified and discussed.

## CONSUMPTION OF HOUSEHOLD TEXTILES

Consumption of fiber in textiles is frequently measured in actual pounds, cotton-equivalent or converted pounds, <sup>1</sup>/<sub>1</sub> numbers of items, and expenditures. Value of shipments, volume of sales, and number of cuttings also reflect changes in the market. Poundage of fiber is an important measure for fiber producers, mills, and policy or market analysts. Retail and farm level demand can be estimated in similar units. However, consumers buy numbers of items and allocate portions of their budget to purchases. While a measure of pounds consumed indicates the fibers consumers are purchasing, consumers do not always buy on the basis of pounds of fiber. They also consider quality, quantity of items needed, price, and applicability to their environment.

Therefore, converted pounds are the main measurements used in this paper, but consumption in both quantity and expenditure terms are considered. Cotton-equivalent or converted pounds are used because wool, polyester and cotton differ in the conversion from raw materials to finished goods. Wool and cotton, particularly, have higher amounts of waste, lint, grease, and other nonfiber elements that are lost during processing than do manmade fibers. The conversion ratios account for differences between the weights of the fibers.

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<sup>1</sup>/<sub>1</sub> Conversion ratios are as follows: cotton--1.00; manmades, cellulosic (rayon, acetate) yarn--1.51, fiber--1.10, noncellulosic (polyester, nylon, acrylic) yarn--1.74, fiber--1.37; wool--0.55.



### End-use Consumption of Fibers in Household Textiles

Apparent changes in actual pounds of fiber consumed for various end uses took place from 1955 to 1975 (table 1). Cotton's share of the market fell by one-half while manmade fibers more than doubled as a percent of total use. Wool's share dropped 88 percent by 1975 (tables 2 and 3) (13).

According to the U.S. Department of Agriculture, in 1970 nearly one-third of all cotton was used in the household textile market, most in sheets and towels (4,p.46). However, between 1970 and 1975 cotton lost 20 percentage points to manmade fibers in the sheet and pillowcase category. Use of blends of cotton with polyester in sheets as well as the use of acrylics and other blends for blankets, tablecloths, and other items resulted in the declines in amounts of cotton used.

### Derived Estimates of Mill Consumption

Similar conclusions result when actual pounds are converted to cotton-equivalent pounds (table 4). Converted pounds exceeded actual pounds by about 300 million pounds because of the higher conversion ratios for manmade fibers and yarns (13). Cotton's share declined by 37 percent from 1950 to 1975. Use of manmade noncellulosics such as polyesters and acrylics increased steadily while use of cellulosics (rayon, acetate) declined. Figure 1 illustrates the sharp increase in fiber consumption from 1950 to 1965 and the closing gap between cotton and noncellulosics, particularly between 1965 and 1975.

Blankets, sheets, pillowcases, towels, drapery and upholstery are the major household textiles. Converting wool and manmade fibers into cotton-equivalent pounds indicates an even greater increase in consumption of manmade fibers for these products than when actual pounds are used (table 5).

Total converted poundage in blankets increased 43 percent from 1950 to 1975, largely because of the expansion of manmade fibers, particularly noncellulosics. The increase in poundage would probably translate into an even greater increase in the number of blankets considering the popularity of light-weight thermals and electric blankets.

Sheets, pillowcases, and towels are a different story because of the comfort and moisture-absorbency of cotton. Wool was never used for these products and rayon performed poorly. Sheets were made exclusively of cotton until 1960 when rayon and rayon blends were introduced. Polyester and cotton blends emerged in 1970 and by 1975 accounted for a large portion of the sheet market. Towels are still mainly made of cotton, although experiments with fabric finishes and weaving techniques are producing blends without sacrificing the comfort and absorbency of cotton.

The relative increases in fiber consumption in drapery and upholstery fabrics in recent years are impressive. Cotton and cotton blended with rayon, nylon and polyester maintained a strong market position although the pounds of nylon and polyester consumed increased steadily.



Table 1--Fiber end-use consumption, 1955-75, selected years

End-use	1955		1965		1975	
	million pounds	Percent	Million pounds	Percent	Million pounds	Percent
Total	6,469	100.0	8,485	100.0	10,913	100.0
Apparel	2,618	40.5	3,484	41.1	4,809	44.1
Home furnishings	1,482	22.9	2,433	28.7	3,258	29.9
Carpets and rugs	385	6.0	773	9.1	1,622	14.9
Household textiles	1,097	17.0	1,660	19.6	1,636	15.0
Industrial and consumer uses	2,078	32.1	2,315	27.3	2,386	21.9
Exports	293	4.5	254	3.0	460	4.2

Source: Textile Organon, Textile Economics Bureau, 1959, 1967, 1976.











Table 3-- Major household textiles end uses by fiber content, 1950-75, selected years

End use	Year	Total fiber		Cotton		Man made		Wool	
		Million pounds	Percent	Million pounds	Percent	Million pounds	Percent	Million pounds	Percent
Household textiles	1950	989	100.0	829	83.8	128	12.9	32	3.0
	1955	1097	100.0	875	79.8	205	18.7	17	1.6
	1960	1269	100.0	965	76.0	299	23.6	5	.6
	1965	1660	100.0	1131	68.1	520	31.3	9	.5
	1970	1778	100.0	1183	66.5	585	32.9	10	.8
	1975	1636	100.0	888	54.3	733	44.8	15	.9
Blankets	1950	104	10.5	50	48.1	28	26.9	26	25.0
	1955	106	9.7	38	35.9	52	49.1	16	15.1
	1960	101	8.5	24	23.8	71	70.3	5	5.0
	1965	122	7.3	36	29.5	76	62.3	9	7.8
	1970	120	6.7	21	17.5	91	75.8	7	5.8
	1975	117	7.2	9	7.7	103	88.0	5	4.3
Towels	1950	161	16.3	161	100.0	-	-	-	-
	1955	156	14.2	156	100.0	-	-	-	-
	1960	206	16.2	202	98.1	4	1.9	-	-
	1965	287	17.3	280	97.6	4	1.9	-	-
	1970	331	18.6	330	99.8	1	.2	-	-
	1975	272	16.6	258	95.0	14	5.0	-	-
Drapery and upholstery	1950	208	21.0	146	70.2	56	26.9	6	2.9
	1955	318	29.0	212	66.7	105	33.0	.8	.3
	1960	316	24.9	173	54.8	142	44.9	.4	-
	1965	451	27.2	149	33.0	302	67.1	-	-
	1970	588	33.1	266	45.2	320	54.4	2	.4
	1975	548	33.5	220	40.2	317	57.9	11	1.9

Continued--



Table 3--Major household textiles end uses by fiber content, 1950-75, selected years, continued--

End use	Year	Total fiber		Cotton		Man made		Wool	
		Million pounds	Percent	Million pounds	Percent	Million pounds	Percent	Million pounds	Percent
Sheets and pillowcases	1950	234	23.7	234	100.0	-	-	-	-
	1955	252	23.0	237	94.1	.4	.2	-	-
	1960	403	31.8	391	97.0	12	3.0	-	-
	1965	519	31.3	484	93.3	35	6.7	-	-
	1970	502	28.2	393	78.3	109	21.7	-	-
	1975	470	28.7	274	58.4	196	41.6	-	-
Bed spreads	1950	77	7.8	75	97.4	8	10.4	-	-
	1955	96	8.6	86	89.6	8	8.3	-	-
	1960	130	10.2	105	80.8	24	18.5	-	-
	1965	168	10.1	119	70.8	49	29.2	-	-
	1970	147	8.3	120	81.6	27	18.4	-	-
	1975	121	7.4	84	69.1	38	30.9	-	-
Curtains	1950	65	6.6	39	60.0	26	40.0	-	-
	1955	40	3.7	20	50.0	20	50.0	-	-
	1960	63	3.8	26	41.3	37	58.7	-	-
	1965	63	5.1	21	33.3	42	66.7	-	-
	1970	44	2.5	19	43.3	25	56.7	-	-
	1975	58	3.6	14	24.1	44	75.9	-	-

Note: Dashes (-) indicate that consumption in these categories was negligible.

Source: Textile Organon, Textile Economics Bureau, 1959, 1967, 1976.



Table 4--Derived estimates for mill consumption of fibers in household textiles, 1950-75, selected years <sup>1/</sup>

Consumption	Unit	1950	1955	1960	1965	1970	1975
Total actual	Million pounds	989	1097	1269	1660	1777	1636
Total converted <sup>1/</sup>	Million pounds	1017	1159	1380	1870	1982	1924
Cotton	Million pounds	829	875	965	1185	1183	888
Cotton	Percent	81.5	75.5	69.9	63.4	59.7	46.2
Man made fibers:							
Total	Million pounds	171	274	412	700	793	1027
Total	Percent	16.8	23.6	29.9	37.4	40.0	53.4
Cellulosics	Million pounds	159	214	257	456	356	233
Cellulosics	Percent	15.6	18.5	18.6	24.4	18.0	11.6
Noncellulosics	Million pounds	12	60	155	244	437	804
Noncellulosics	Percent	1.2	5.2	11.2	13.1	22.1	41.8
Wool	Million pounds	18	17	3	5	5	9
Wool	Percent	1.8	1.5	.2	.3	.3	.5

Source: Textile Organon, Textile Economics Bureau.

<sup>1/</sup> Conversion ratios are as follows--Cotton, 1.00; Cellulosics, Yarn, 1.51, Fiber, 1.10; Noncellulosics, Yarn, 1.74, Fiber, 1.34; Wool, .55.



Table 5--Derived estimates for mill consumption of fiber in household textiles, 1950-75, selected years

Consumption	Blankets						Sheets					
	1950	1955	1960	1965	1970	1975	1950	1955	1960	1965	1970	1975
	Million pounds											
Total actual	104.2	106.3	100.6	121.0	120.0	117.0	234.4	237.7	402.9	518.5	501.9	469.7
Total converted	98.3	108.9	111.2	132.2	145.2	155.3	234.4	238.0	404.8	523.7	537.7	543.9
Cotton	50.0	37.9	24.2	36.4	21.3	9.0	234.4	237.3	391.0	484.0	393.0	274.1
Wool	25.9	16.3	5.0	8.9	7.4	4.9	---	---	---	---	---	---
Wool converted	14.3	9.0	2.8	4.9	4.1	2.7						
Manmade fibers:												
Total	28.3	52.1	71.4	76.3	91.3	103.7	---	.4	11.9	34.5	108.9	195.6 <sup>1</sup>
Total converted	34.0	62.0	84.2	90.9	119.8	143.6	---	.7	13.8	39.7	144.7	269.8 <sup>8</sup>
Cellulosics (rayon, acetate)												
Yarn	7.0	6.1	2.8	2.1	1.2	.5	---	.1	1.0	1.5	3.5	.7
Converted (1.51)	10.6	9.2	4.2	3.2	1.8	.8	---	.2	1.5	2.3	5.3	1.1
Fiber	21.3	38.8	55.1	55.3	26.8	.3	---	---	10.5	30.6	18.9	7.5
Converted (1.10)	23.4	42.7	60.6	60.8	29.5	.3	---	---	11.6	33.7	20.8	8.3
Non-cellulosics (nylon, polyester)												
Yarn	---	.7	2.4	2.9	4.7	4.2	---	.3	.4	.4	.1	9.8
Converted (1.74)	---	1.2	4.2	5.0	8.2	7.3	---	.5	.7	.7	.2	17.1
Fiber	---	6.5	11.1	16.0	58.6	98.7	---	---	---	2.0	86.4	177.6
Converted (1.37)	---	8.9	15.2	21.9	80.3	135.2	---	---	---	2.7	118.4	243.3

Continued--









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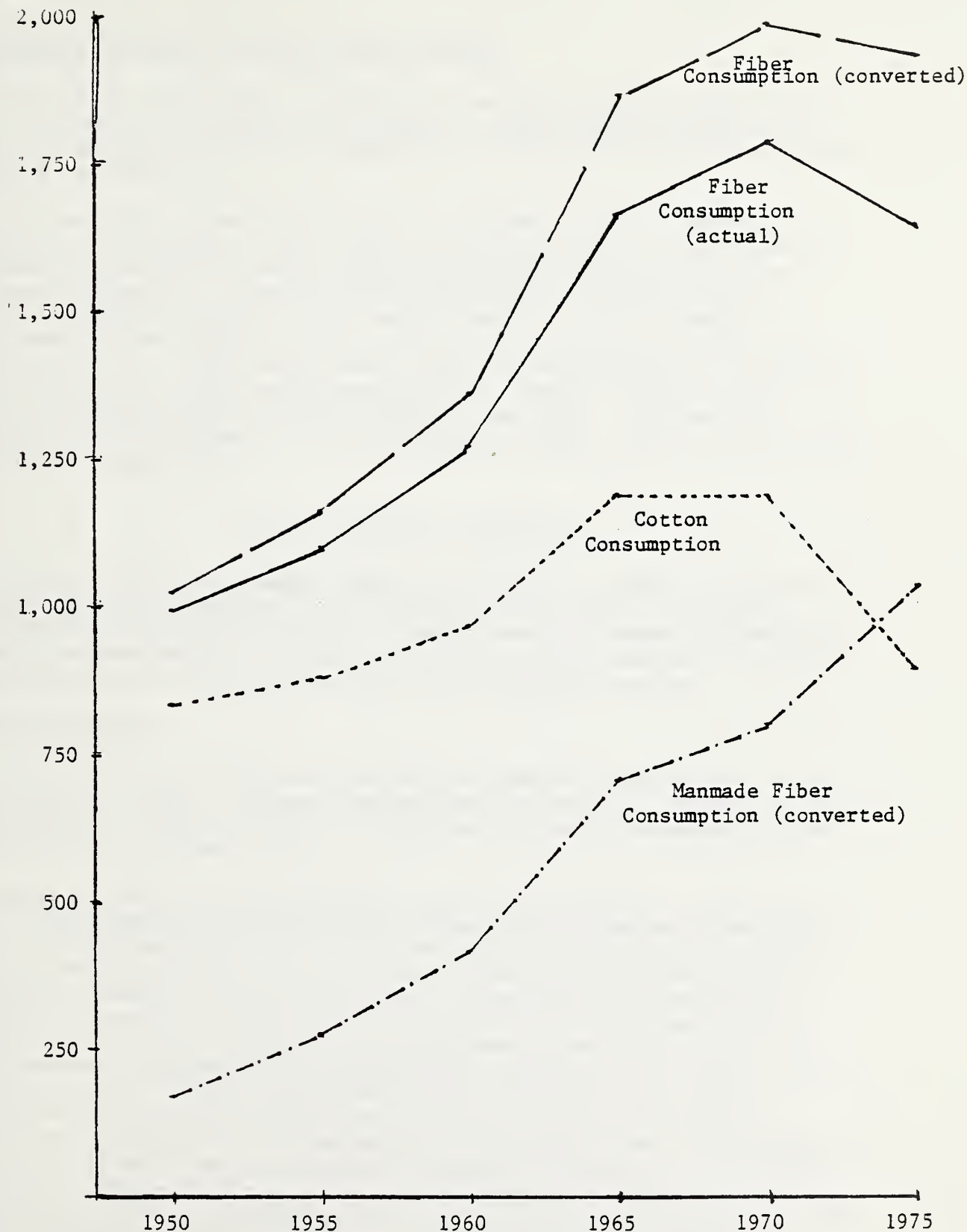


Chart 1--Derived estimates for mill consumption of fibers for household textiles



### Consumption Per Person, Family, and Household

The number of households, families and persons increased from 1950 to 1975. However, per household, per family, and per person consumption of fibers in household textiles increased until 1965 and then turned downward (table 6 and figure 2).

Per household consumption of fiber in blankets, sheets, towels, draperies and upholstery moved slightly upward from 1960 to 1970 (table 7). Per family consumption figures were slightly higher but paralleled per household consumption. The differences between per household and per family consumption increase over time--blankets (0.2 to 0.4 pound difference between 1960 and 1970), sheets (0.6 to 1.8 pound difference), towels (0.4 to 1.1 pound difference), draperies and upholstery (0.6 to 2.7 pound difference). Per person consumption of blankets, sheets, towels and draperies and upholstery increased slightly over time. The largest increases, 1.5 to 2.5 and 1.5 to 3.2 pounds per person, were for sheets and draperies, respectively.

### FACTORS AFFECTING CONSUMPTION

Factors affecting enduse consumption of fiber in household textiles can be separated into conditions in the market (price, quality, promotion, competition) and household factors (income, household composition and size, housing, preferences and lifestyle). Trends in fiber consumption parallel changes occurring in both the market and the household sectors.

#### Market Conditions

Fibers differ in characteristics such as comfort, absorption, elasticity and warmth that make them suitable for sheets, blankets, towels, and draperies. Price, quality and promotion influence the demand for and competitiveness of fibers (10).

Smith and Davis in 1972 predicted that cotton's share in sheeting and other bedding would decline from 99.8 percent to 93.6 percent from 1957 to 1999, in bedspreads from 90.5 to 50.1 percent, and in drapery, upholstery and slipcovers from 66.9 to 21.9 percent. They attributed much of the decline to competition from non-cellulosic fibers that were expected to capture 1.2 percent, 25.9 percent, and 16.0 percent of the markets for sheets, draperies and upholstery, and bedspreads, respectively, by 1999. Smith and Dardis suggested that technological advances and the shift from woven to knit would influence market shares. The particular market structure for the various fibers are discussed as important factors in interfiber competition: "The synthetic fiber producers are few in number, operate in a highly technical research-oriented environment, and have the ability to combine all these variables--price, quality, and promotion--in an optimum manner. In contrast, the cotton fiber industry consists of many small units with a consequent lack of control over product quality and price" (10,p.215).



Table 6--Fiber consumption for household textiles by number of households, families, and total population, 1950-75, selected years.

Item	Unit	1950	1955	1960	1965	1970	1975
Total fiber consumption	Million lbs.						
Actual	do.	989	1097	1269	1706	1777	1636
Converted	do.	1017	1159	1380	1876	1982	1924
Number of households	Millions	43.6	47.9	52.8	57.4	63.4	71.2
Per household consumption	Pounds						
Actual	do.	22.4	22.9	24.0	28.9	28.0	23.0
Converted	do.	23.3	24.2	26.1	32.6	31.3	27.0
Number of families	Million	39.3	42.0	45.1	48.0	51.6	55.7
Per family consumption	Pounds						
Actual	do.	25.2	26.1	28.0	34.6	34.4	29.4
Converted	do.	25.9	24.2	30.6	39.0	38.4	35.5
Total population	Millions	151.7	165.3	180.7	194.3	204.9	213.6
Per capita consumption	Pounds						
Actual	do.	6.5	6.6	7.0	8.5	9.7	7.7
Converted	do.	6.7	7.0	7.6	9.6	9.7	9.0

Sources: U.S. Statistical Abstract of the United States; Textile Organon.







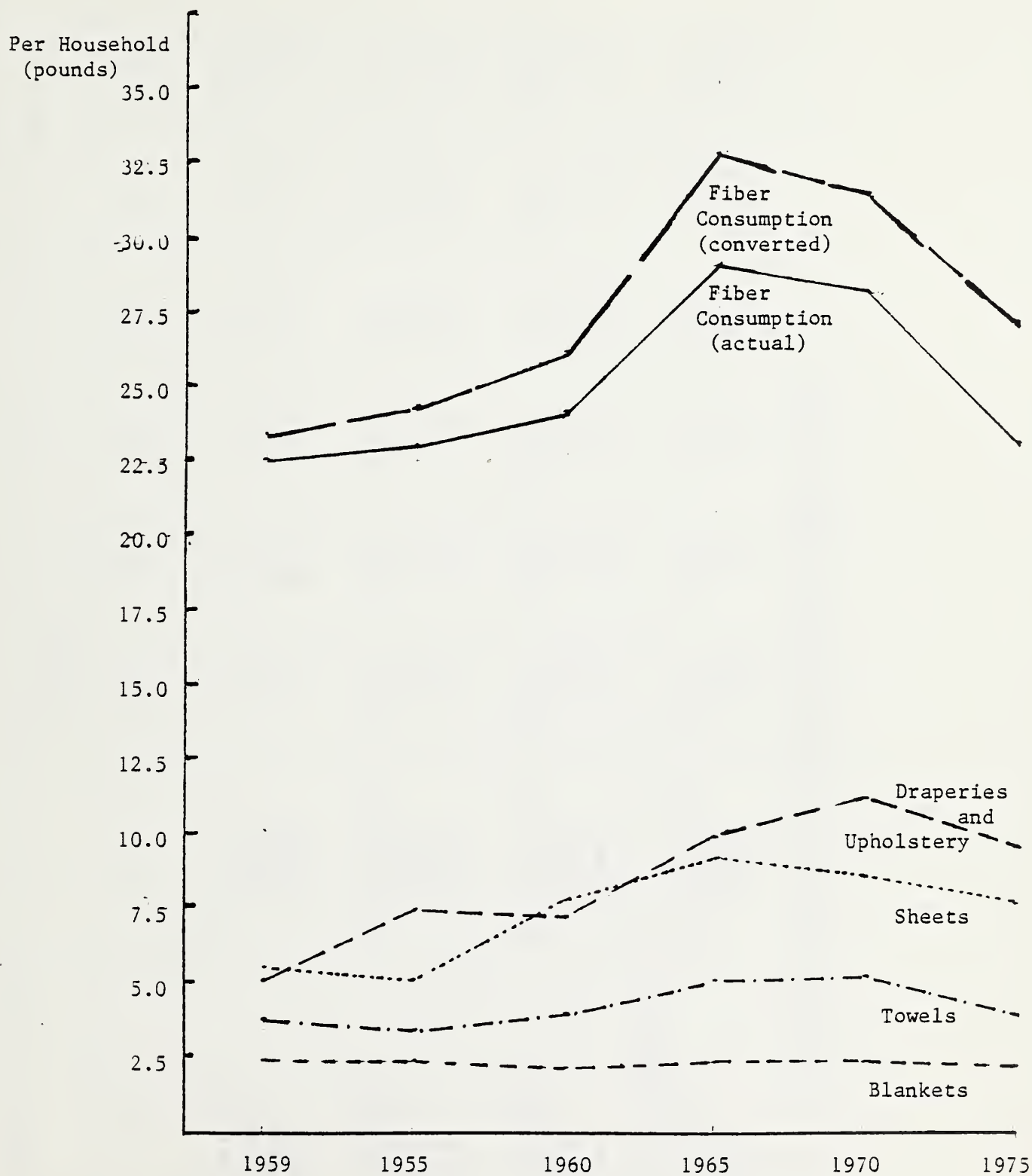


Chart 2--Per household consumption of household textiles



Table 7--Fiber consumption of selected household textiles per household, per family, per person,  
1950-1975

Item	Unit	1950	1955	1960	1965	1970	1975
Blankets							
Total converted	Million pounds	98.3	108.8	111.2	132.2	145.2	155.3
Per household	Pounds	2.3	2.3	2.1	2.3	2.3	2.2
Per family	Pounds	2.5	2.6	2.5	2.8	2.8	2.6
Per person	Pounds	.6	.7	.6	.7	.7	.7
Sheets							
Total converted	Million pounds	234.4	238.0	404.8	523.7	537.7	543.9
Per household	Pounds	5.4	5.0	7.7	9.1	8.5	7.6
Per family	Pounds	6.0	5.7	9.0	10.9	10.4	9.8
Per person	Pounds	1.5	1.4	2.2	2.7	2.6	2.5
Towels							
Total converted	Million pounds	160.5	156.4	206.8	287.3	330.6	276.3
Per household	Pounds	3.7	3.3	3.9	5.0	5.2	3.9
Per family	Pounds	4.1	3.7	4.6	6.0	6.4	5.0
Per person	Pounds	1.1	1.9	1.1	1.5	1.6	1.3
Draperies and upholstery							
Total converted	Million pounds	220.1	354.0	380.6	565.1	709.5	679.7
Per household	Pounds	5.0	7.4	7.2	9.8	11.2	9.5
Per family	Pounds	5.6	8.4	8.4	11.8	13.8	12.2
Per person	Pounds	1.5	2.1	2.1	2.9	3.5	3.2

Sources: U. S. Statistical Abstract of the United States, Textile Organon.



Manmade fiber producers, with more control over output, quality, and promotion plus greater investments in technology to improve productivity, were able to reduce prices on manmade fibers (table 8). Prices of polyester fibers in raw fiber equivalents dropped 73 percent from 1950 to 1975 while cotton prices increased 14 percent. Prices of polyester fibers were very attractive to mills seeking to lower costs of production.

However, increased petrochemical costs and costs to implement pollution standards and other regulations have affected fiber prices. Polyester prices are expected to increase or plateau in the seventies and eighties.

Wholesale prices of cotton products increased, partly in response to raw material prices (table 9). From 1970 to 1975 the Wholesale Price Index (WPI) for cotton textile products increased 60 percent while the WPI for wool products increased slightly. The WPI for manmade fiber products increased 26 percent from 1970 to 1975. The overall WPI for textile products and apparel rose 29 percent from 1970 to 1975 while the WPI for textile home furnishings (including carpets and rugs) increased 47 percent.

The Consumer Price Index (CPI) for textile house furnishings, however, rose 30 percent between 1970 and 1975, more than the increase for apparel, 22 percent; less than the increase for food, 50 percent; and all products, 37 (table 10).

Between 1955 and 1965 prices of five selected textile items did not change very much. After 1965 the CPI for the five selected textile items increased considerably and at different rates (table 11). The trends for each of the items were similar, slowly increasing from 1955 to 1975. Because the specifications of the Bureau of Labor Statistics allow fiber contents, quality, and retail outlet to vary considerably, price increases for cotton items, cotton and manmade fiber blends, and manmade fiber items cannot be compared.

A USDA study found that prices of raw materials were important factors affecting the retail demand for household textiles (4). The price elasticity estimated for cotton in sheets and towels was near 1.0. That is, an increase in the cotton price of one percent reduced the quantity demanded of cotton in sheets and towels by one percent. As the relationship between the cotton price and the manmade (polyester) price widened 10 percent, the quantity demanded of cotton fell 2 percent (4,p.26). In addition, a 10 percent increase in the wool price caused wool use in household textiles to fall 4 percent. Based on the results of the study, the non-cellulosic manmade fibers such as polyester were expected to replace cellulose such as rayon and acetate.

#### Income

Income is a major explanatory factor in studies of demand, consumption, and expenditures. Donald, et al, found that "the single factor with the most influence on total domestic fiber consumption was the level of real disposable income." A 1-percent change in real disposable income









Table 9--Wholesale price index for selected commodities, 1950-75, selected years

Item	:	:	:	:	:	:	:					
	:	1950	:	1955	:	1960	:	1965	:	1970	:	1975
	:	:	:	:	:	:	:	:	:	:	:	:
Textile products and apparel	:	102.7	:	98.7	:	99.5	:	99.8	:	107.1	:	137.9
Textile house furnishings	:	99.9	:	94.4	:	96.1	:	97.3	:	103.5	:	151.9
Apparel	:	90.5	:	92.6	:	94.9	:	97.1	:	110.8	:	133.4
Cotton products	:	109.5	:	100.7	:	103.7	:	99.5	:	105.6	:	169.4
Wool products	:	105.1	:	97.5	:	95.1	:	101.0	:	99.4	:	108.3
Manmade products	:	135.8	:	123.5	:	112.7	:	109.8	:	102.0	:	128.2
	:		:		:		:		:		:	

Source: Handbook of Labor Statistics, U.S. Department of Labor, Bulletins No. 1735, 1905 (Washington, D.C., 1972, 1976).



Table 10--Consumer price index, 1950-75, selected years

	:	:	:	:	:	:	:	:	:			
	:	1950	:	1955	:	1960	:	1965	:	1970	:	1975
	:	:	:	:	:	:	:	:	:	:	:	:
	:	1967 = 100										
All products	:	72.1	:	80.2	:	88.7	:	94.5	:	116.3	:	159.3
Food	:	74.5	:	81.6	:	88.0	:	94.4	:	114.9	:	171.8
Housing	:	70.4	:	79.1	:	90.2	:	94.9	:	118.9	:	135.0
Apparel	:	79.0	:	84.1	:	89.6	:	93.7	:	116.1	:	141.8
Household furnishings	:	95.5	:	99.2	:	99.3	:	97.1	:	111.4	:	144.0
Textile house furnishings	:	N.A.	:	91.9	:	94.5	:	96.0	:	109.2	:	141.4

Note: NA indicates data are not available.

Source: Handbook of Labor Statistics, U.S. Department of Labor, Bulletins No. 1735, 1905 (Washington)







per capita would be expected to result in a 1-percent change in the same direction of per capita total domestic consumption (3,p.3).

Other studies also indicated that expenditures on textile end products rose as total personal expenditures and disposable income increased. Per capita income in 1958 dollars was the major explanatory variable where the dependent variable was per capita expenditures (20,p.x).

In the aggregate, disposable personal income and total fiber consumption in household textiles rose steadily from 1950 to 1970, but dropped after 1970 (table 12). Total personal consumption expenditures also rose during the period (figure 3).

However, the trend for fiber consumption of household textiles followed more closely the trend for median family income in 1975 dollars than for disposable income (figure 4).

#### Household Size and Composition

Household size and composition also directly impact the quantity of household textiles desired and consumed. It is expected that as the average size of the household declines, fiber consumption in household textiles will also decline ceteris paribus. Average household size did decrease, from 3.37 in 1950 to 2.94 in 1975 (table 13) (19). The effect on fiber consumption is not clear.

Changes in composition of households may also affect fiber consumption in textile enduses. The numbers of single person households and two- or three-member households increased dramatically from 1950 to 1975 while the number of larger households declined after 1960. Does this change imply that smaller households are less likely to want as many textiles as larger households? Or are the smaller households younger and in the process of accumulating household goods? On the other hand, if older single person households rely on second-hand goods, they may be purchasing few, if any, household textiles.

#### Housing

Family size, income, and housing combine to impact fiber consumption in household textiles. Housing not only implies expenditures on mortgages and rents but also decoration, alterations, remodeling, and maintenance.

Expenditures on upholstery, sheets and bedspreads, towels and curtains and draperies are both complements and substitutes to housing. New housing usually requires redecoration to fit the personality and needs of the household to the living space. Older housing is often updated, revitalized, and altered by changing color, texture and design and by changing the furnishings.

Rather than purchasing new housing, households may renovate or refurnish. More rooms imply more furnishings. Textile furnishings and carpets play a large part in alterations. However, it is likely that new





Table 12--Fiber consumption for household textiles by income, 1950-75, selected years

Item	Unit	1950	1955	1960	1965	1970	1975
Total fiber consumption							
Actual							
Converted							
	Million pounds	989	1,097	1,269	1,660	1,777	1,636
	Million pounds	1,017	1,158	1,380	1,870	1,982	1,924
Disposable personal income							
	Million dollars	205.5	273.4	349.4	472.4	685.9	1,080.9
Personal consumption expenditures							
	Million dollars	192.0	253.7	324.9	430.2	618.8	973.2
Median income of families							
	Constant 1975						
	dollars	7,422	8,881	10,214	11,867	13,676	13,719

Source: U.S. Statistical Abstract of the United States; Textile Organon



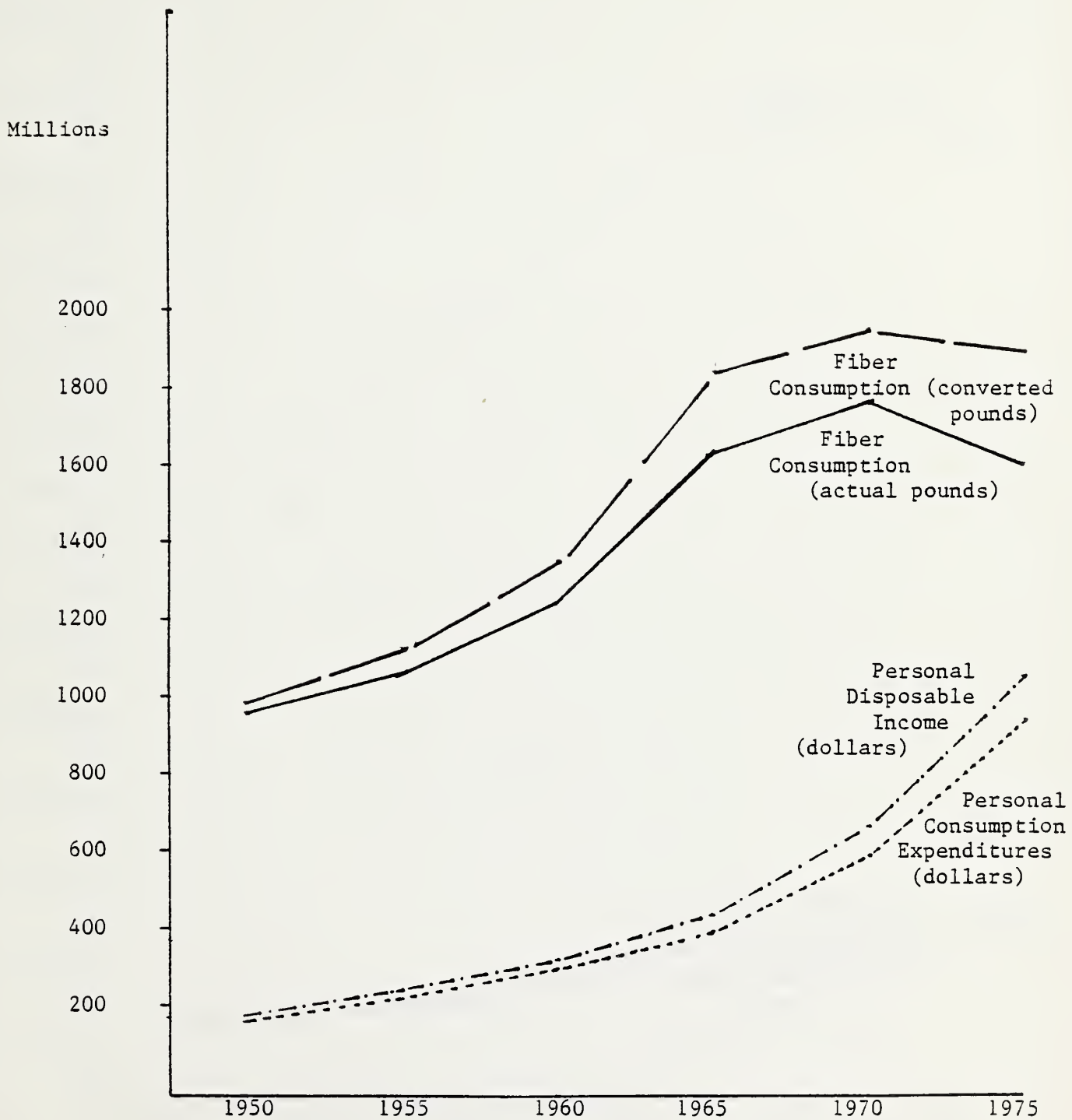


Chart 3--Fiber consumption in household textiles, personal disposable income, and personal consumption expenditures.



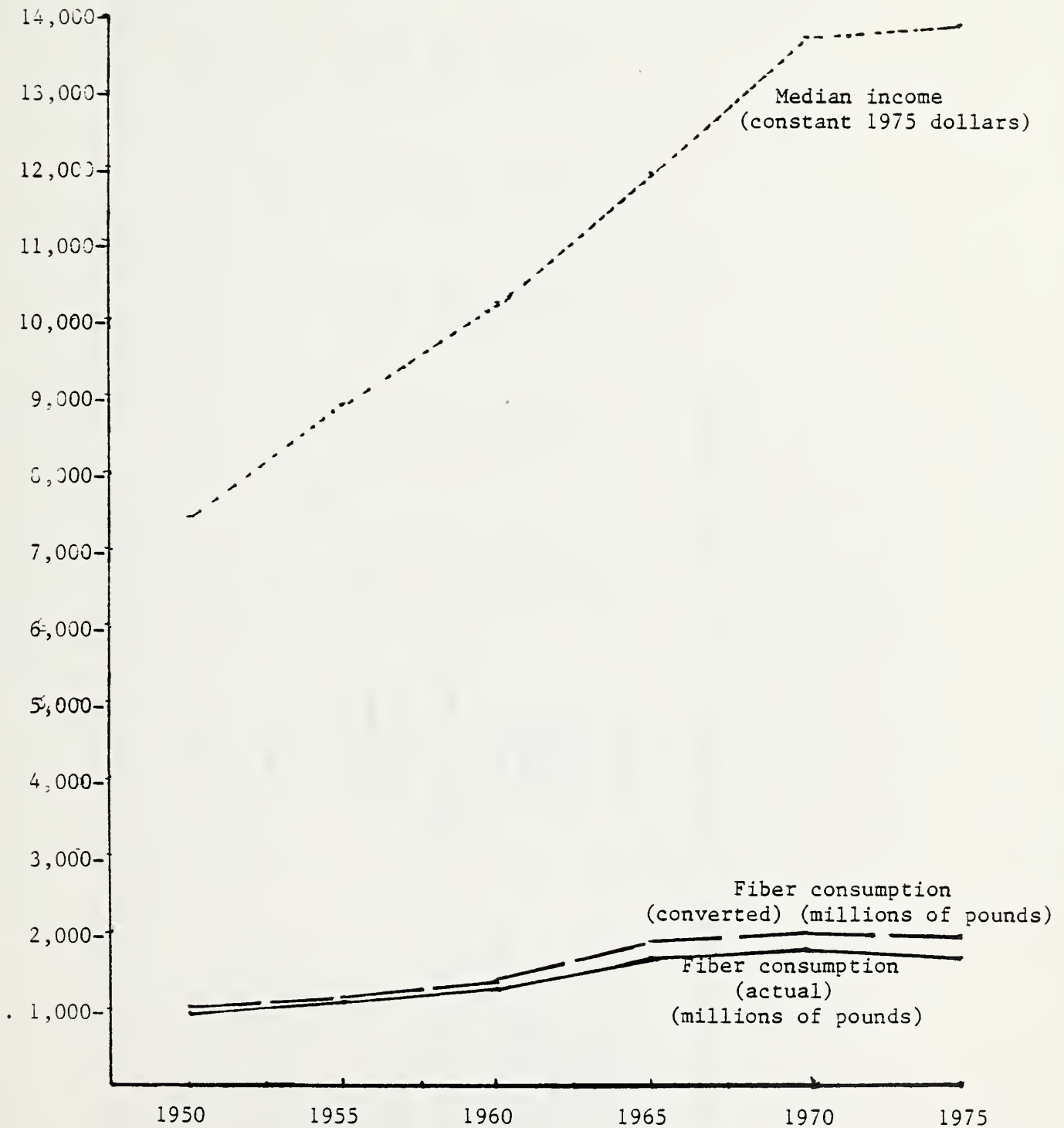


Chart 4--Fiber consumption in household textiles, median family income



Table 13--Fiber consumption in household textiles by size of household, 1950-75, selected years

Item	Unit	1950	1955	1960	1965	1970	1975
Average household size	Number	3.37	3.33	3.33	3.29	3.14	2.94
Households with							
1 member	Millions	4.7	5.2	6.9	8.6	10.7	13.9
2-5 members	Millions	34.4	34.7	33.9	41.8	55.4	51.7
6 or more members	Millions	4.1	4.9	5.9	5.8	5.7	5.6
Total converted consumption	Million pounds	1,017	1,159	1,380	1,870	1,982	1,924
Total per household consumption	Pounds	28.9	30.0	30.0	39.6	31.3	27.2
Blankets per household	Pounds	2.3	2.3	2.1	2.3	2.3	2.2
Sheets per household	Pounds	5.4	5.0	7.7	9.1	8.5	7.6
Towels per household	Pounds	3.7	3.3	3.9	5.0	5.2	3.9
Draperies and upholstery per household	Pounds	5.0	7.4	7.2	9.8	11.2	9.5

Source: U.S. Statistical Abstract of the United States, Textile Organon





furnishings are purchased when households acquire their first home and when households move into larger dwellings. For this reason, fiber consumption in household furnishings is expected to parallel new housing starts and other housing construction.

New housing starts increased until 1969 but slackened in the seventies (table 14). Additions and alterations increased slightly from 1970 to 1975.

Since 1960, fiber consumption has followed housing starts although there appears to be a slight lag (figure 5). Replacements of textiles and inventory adjustments do not necessarily coincide with housing starts. Households that bought new homes might have difficulty obtaining the money to decorate them. They also might rely on past stocks until decorating plans are formulated.

The demand for housing and consumption of household textiles may be more closely linked to living space requirements than to actual houses. More bedrooms, bathrooms, windows, and furniture suggest more sheets, curtains, draperies, towels, and upholstery.

Winter and Morris found that, although more apartments and mobile homes were available, families preferred single units. Families also have spatial desires that relate to life cycle. Families avoid having more than two people in the same bedroom. They tend to separate children of opposite sexes as soon as possible and usually before the age of puberty. Ideally, each member has a bedroom. Family members seek privacy, particularly for teenagers and young adults (22,p.7). They also preferred more than one bathroom.

Between 1960 and 1970 the median number of rooms per housing unit increased from 4.9 to 5.2. The increase was shared by owner-occupied and rental units indicating increased demand for space (table 15). The distribution of rooms per unit also changed. By 1975 the percent of units with 3 or less rooms had decreased and the percent with 7 or more units had increased. Between 1970 and 1975 the number of bedrooms and bathrooms also changed. More new homes with 3 bedrooms were constructed in 1975 and a higher percentage had 2 or more bathrooms.

Consumption of specific textiles relates to the number of bedrooms or bathrooms. The number of blankets and sheets consumed by a household would be expected to increase with the number of bedrooms and beds. Similarly, the number of towels would be expected to increase with the number of bathrooms. However, it is difficult to make clear inferences from the data. Data are presented in converted pounds rather than in quantities of items. Fiber consumption in sheets and blankets rose fairly consistently throughout the period as expected while consumption in towels and upholstery declined from 1970 to 1975.

The data on characteristics of housing units are insufficient to draw clear conclusions about the relationships between housing and consumption of textiles. More information is needed concerning size of units, number



Table 14--Fiber consumption for household textiles, housing starts, and interest rates, 1950-75, selected years

Item	Unit	1950	1955	1960	1965	1970	1975
Fiber consumption							
Actual							
Converted	Million pounds	989	1,097	1,269	1,706	1,777	1,636
		1,017	1,159	1,380	1,876	1,982	1,924
New housing starts	Million units	2.0	1.7	1.3	1.5	1.5	1.2
Additions and alterations	Million units				3.9	4.2	5.0
Interest rates							
New housing	Percent				5.7	8.2	8.7
Existing housing	Percent				5.9	8.2	8.9

Note: Blanks indicate information not available.

Source: U.S. Statistical Abstract of the United States



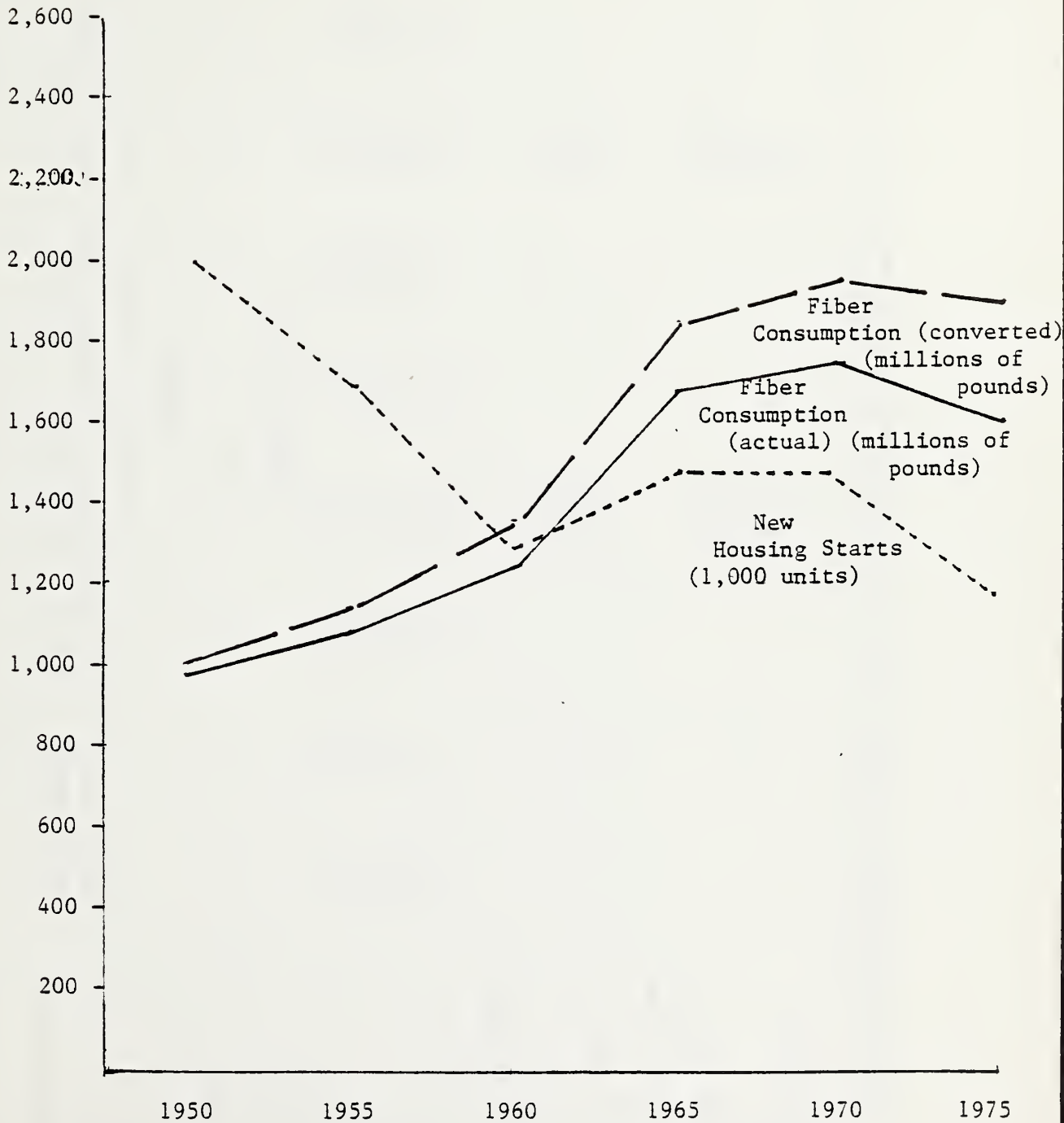


Chart 5--Fiber consumption and new housing starts.



Table 15--Selected characteristics of housing units, 1960, 1970, 1975

	1960			1970			1975		
Characteristic	Total: Owner- units: occupied	Renter- occupied	Total: Owner- units: occupied	Renter- occupied	Total: Owner- units: occupied	Renter- occupied	Total: Owner- units: occupied	Renter- occupied	
Median number of rooms:	4.9	5.5	3.9	5.2	5.7	4.1	5.1	5.7	
Rooms in unit	Percent of units								
1 to 3	17.0	6.0	37.0	13.0	3.0	31.0	13.0	3.0	
4	21.0	17.0	28.0	19.0	14.0	30.0	21.0	12.0	
5	26.0	29.0	19.0	26.0	28.0	21.0	25.0	29.0	
6	20.0	26.0	10.0	22.0	27.0	22.0	20.0	26.0	
7 or more	16.0	22.0	6.0	20.0	28.0	7.0	21.0	30.0	
Number of bedrooms									
2 or less				13.0				14.0	
3				63.0				65.0	
4 or more				24.0				21.0	
Number of bathrooms									
1 or less				32.0				24.0	
1½				20.0				17.0	
2				32.0				40.0	
2½ or more				16.0				18.0	

Source: Statistical Abstract of the U. S., U. S. Census and Housing and Urban Development Construction Reports (25, Characteristics of New One-Family Houses) (Joint publication).





of rooms of various types and sizes, inventories of furniture, number and size of windows, numbers of household textiles as well as pounds, frequency of changing sheets and towels, and use of other household textiles such as table linens.

### Lifestyle Characteristics

Income, housing and household composition are often used to capture the effects of differences in lifestyle on consumption patterns. Less quantifiable factors such as fashion, preferences, home management practices, and inventory adjustments also influence purchases of household textiles.

Fashion--Color, texture, and design do influence the way people feel about their environments and are motivating factors in the purchases of textiles. In recent years the quantity of sheets produced in fancy prints and patterns exceeded the quantity of solids and whites (15). Fancy patterns and designer signatures appear on sheets, towels, table linens, and other textiles. Blankets are also produced in a variety of sizes, weights, colors, textures and designs.

The size and shape of furniture, windows, and other surroundings influence the suitability of existing inventories. Textiles match or complement the decor. They may become outdated or inappropriate to the furniture and other decoration (wallcoverings, floorings, colors of appliances, and styles of furniture). The popularity of larger bath towels, pillows, sofas and beds influence what is purchased. Consumers also buy certain fibers and weaves based on fashion, availability, adaptability to the environment, and preference.

Preferences--A consistent finding throughout studies of consumer satisfaction with household textiles is that appearance, comfort, ease of care, and durability are major concerns (2, 2, 18). Discontent centered on complaints about fabric wear and construction, but generally, consumer satisfaction with household textiles was quite high (11). Polyesters and cotton/polyester blends often met the criteria of easy care, durable press, and durability (2). Studies by Linden and Hughes also found that consumers were generally satisfied with the value received for the money in home furnishings (7, 11).

Home management practices--Avoidance of ironing and desirability of machine washable fabrics are strong factors in making fiber choices. Other management practices are also related to the consumption of household textiles and fibers.

The frequency of changing sheets and towels plus the number of loads of laundry washed and dried per week affects the number of towels and sheets purchased. Preferences for absorbent, fluffy towels, cotton in sheets, and heavy wool blankets influence the types of each item purchased. Allergies, temperature of rooms, and personal comfort affect use of synthetics or



wools, many blankets or thermals and electric blankets and cotton or blended towels. Appearance and comfort may be less important than the inconvenience of washing and ironing.

Style of entertaining and daily living plus the time and interest devoted to household chores affect the types of items, fibers, and finishes purchased and the number of items. These characteristics are difficult to measure. However, attitudes and practices would be expected to affect fiber and textile purchases.

Inventory adjustments--Consumers adjust inventories in response to income and budget constraints and family needs. Examination of data from federal surveys of consumer spending revealed that expenditures on household textiles seldom exceeded 1 percent of total annual expenditures of the average family, but that 15 percent of families had no expenditures on household textiles (21,p.3). Findings from a survey of 510 farm and 630 city families in Nebraska, Iowa, and Illinois indicated that income, family size, recency of moving, farm or city residence, and home ownership were related to acquisition of household textiles.

Sources other than purchasing household textiles new were important--67.6 percent of farm families and 62.2 percent of city families in the sample acquired textiles from supplementary sources--gifts, trading stamps and prizes, made at home, borrowed or rented, purchased used (21,p.17). It was mainly the lower and low-middle income groups that obtained textiles from supplementary sources. Larger families and households with younger wives and with infants acquired more textiles, including from supplementary sources such as gifts. However, data on inventory adjustments over the life cycle are lacking because longitudinal studies and complete records of purchases and acquisitions are costly, and families are difficult to track (21,p.25).

Cross-sectional analysis of household purchases would be useful to researchers in isolating household characteristics that affect purchases.

#### SUMMARY AND IMPLICATIONS

Economists predict that the market for home furnishings would increase during the seventies and eighties. By 1980 manmade fibers would enjoy much of the increase and that nearly 75 percent of all fibers produced would be manmade partly because of lower prices relative to cotton and wool (5,p.65). The durable press and easy care features of manmade fibers encourage acceptance. In addition, rising incomes and the increasing population of 24-34 year olds and 35-44 year olds would indicate stimulated demand for all home furnishings.

Competition for income from housing, utilities, and food will probably be an important factor in establishing the total consumption of household textiles. Fashion, housing starts, family size and composition, and lifestyle preferences also need to be considered.





One approach to studying consumption patterns for fibers is to focus on the ways households choose to react to price and income changes in their style of living. Shifts in household size, space requirements, laundering and maintenance patterns, fuel consumption, patterns of entertaining, and pursuit of leisure activities may affect what types and quantities of textiles and fibers consumed. Cross-sectional and longitudinal analyses provide some insight into the consumption process. Incorporating attitudinal and behavioral data into such analyses would greatly expand the understanding of the consumption process. But data on attitudes, behavior patterns, and even on actual purchases at the household level are not readily available and are often time specific.

One conclusion seems obvious. The trend toward manmade fibers and blends in household textiles is upward. Ease of care, durability, fashion, practicality, and price encourage consumers to purchase more manmade fibers. Living patterns such as the use of more blankets and lower thermostats or more machine washable, soil-resistant fabrics, will affect the amount and composition of textiles.

Technological and fashion advances will increase the appeal of some fibers, finishes, and types of textiles. Fiber manufacturers are developing nonwovens for use in hospitals, offices, and the home. Underpads, sheets, pillowcases, diapers, table linens, and towels are disposable and sometimes reusable. New finishes, colors, textures, and fibers keep the market fresh and expanding. On the other hand, these same finishes and processes raise environmental, health, safety, and other regulatory problems.

The textile industry, as a whole, is faced with numerous questions. Competition for the household dollar, competition with imports, costs of regulations, health and safety issues, changing incomes and lifestyles, and rising prices of raw materials and equipment are concerns facing the entire industry. The market for household textiles is particularly affected because households can postpone purchases or make adjustments in their use of textiles. In addition, household textiles may vary in price, size, weight, and fiber composition implying an ability to adjust the types, prices, and quantities purchased. Further analysis of the fiber consumption in household textiles requires more detailed information about prices, fiber preferences, and household patterns of purchase and use.



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